



**FUN**DAMENTAL  
MOTOR SKILLS PROGRAMME  
MANUAL



IN ASSOCIATION WITH  
THE CENTRE FOR HUMAN PERFORMANCE SCIENCE  
OF THE  
UNIVERSITY OF STELLENBOSCH



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## INVESTING IN OUR CHILDREN FOR A BETTER TOMORROW



**SABS**

DESIGN  
EXCELLENCE  
AWARDS  
2009



## ATTITUDE THROUGH APTITUDE

[WWW.YBIKE.CO.ZA/PROGRAMME](http://WWW.YBIKE.CO.ZA/PROGRAMME)

# INTRODUCTION

Preschool children are at a stage in their lives when they are developing and refining fundamental movement skills, which are the basis of future movement skill capabilities<sup>1</sup>. The development of these fundamental motor skills is essential for achieving school readiness as well as for facilitating a child's progression through school<sup>3</sup>.

Every child requires many opportunities for vigorous physical activity and participation in a variety of different movement experiences in order to achieve his/her optimal growth and development. Many child development experts are concerned that many children do not have sufficiently active lifestyles and as a result are not developing critical body balance and coordination skills. The suggestion has been made that this lack of balance and coordination has contributed to an increase in the rate playground injuries<sup>4</sup>.

The YBIKE activity programme is the first of its kind in South Africa and is designed to stimulate gross motor skill development, and encourage children to actively engage in fun activities, which provide an opportunity to experience essential movements.

The YBIKE programme should be used in conjunction with other activities (e.g. rolling, running, skipping etc.) which are essential to gross motor skill development, to ensure a holistic approach to fundamental gross motor skill development.

Use your judgement about the difficulty of the activities for the children. Keep the children challenged, but always ensure success first.

Always ensure the child's safety while the children are playing on the YBIKE; however be careful not to inhibit creativity.

Although activities are provided the children should be given time to explore their environment while riding the YBIKE. Please feel free to adapt the YBIKE activities or come up with your own activities.

# HOW TO IMPLEMENT THE YBIKE PROGRAMME

<b>Step 1</b>	Familiarise yourself with the test items provided in the manual. Ensure you have all the equipment required for the tests.
<b>Step 2</b>	Assess the children in your class using the items appropriate for each child's age. Use the score sheets provided to record each child's score.
<b>Step 3</b>	Record each child's performance on the charts provided.
<b>Step 4</b>	Implement the YBIKE activities programme. Ideally a child should participate in gross motor skill activities everyday for at least 1 term to measure changes. You are encouraged to allow the children to experience <i>at least</i> 30 minutes of play on the YBIKE twice a week.
<b>Step 5</b>	Complete WOW card per child (or use print outs if available) after each play session to encourage the child and give general feedback to the parent on the days' session.
<b>Step 6</b>	Assess the children after each term to track improvements in the fundamental gross motor skills that are being assessed.
<b>Step 7</b>	Record each child's performance on the charts provided.
<b>Step 8</b>	Report back to each child's parent on the child's performance at the end of each term.

# YBIKE FUNDAMENTAL SKILL TESTING

(Step 2 + 6)

The test items below are designed to allow the teacher to track development of the selected fundamental skills that they are testing. Please note that these test items are by no means a comprehensive profile for motor skills testing, and therefore should not be used for diagnostic purposes.

## Things to remember for the testing procedure

Prior to beginning a testing session, prepare the area and ensure that all the equipment required is in place. Ensure that there is enough room for the performance on the test item. For example for the balancing test items ensure that the child is not standing near a wall or chair which he/she can hold on to.

Ensure the children are comfortable for what is required. Ensure that the test items are FUN. Don't tell the children that they are being tested. Do not force a child to perform an activity; rather gently encourage them to participate.

Demonstrate each test item to all the children. Make sure that your demonstration is correct as the children will be copying your movement. If you are unable to demonstrate the correct movement ask someone else to come and demonstrate.

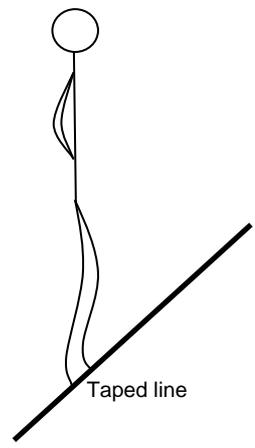
Ensure that the environment is conducive to the child performing at their best; therefore try to have a quiet, distraction free area for testing. Challenge the child to do their best, for example say, "Show me how far you can jump".

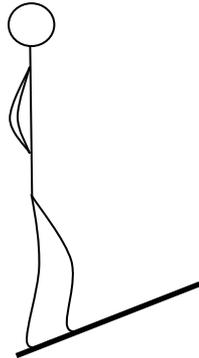
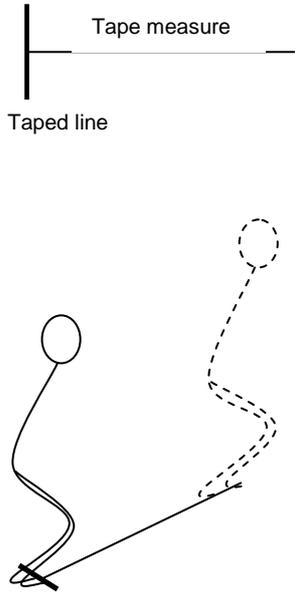
All test items should be performed barefoot, and excessive clothing (jackets etc.) should be removed so that they do not hamper performance.

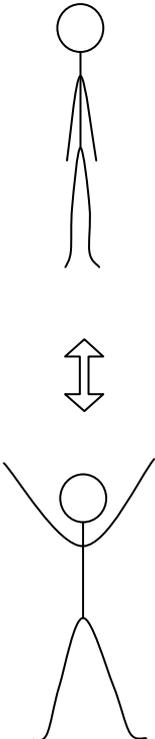
Ensure a safe environment. Remove any obstacles that may cause harm. Stand close when doing balance test items in case a child begins to fall.

Give each child 3 turns for each test item. If the child's first or second attempt is performed incorrectly remind him or her of the correct technique. You may need to move a child's foot or hand so that they are in the correct position.

Keep the same criteria for testing for every testing session.

<p><b>Item 1</b></p> <p><b>Skill</b></p> <p><b>Age</b></p> <p><b>Equipment</b></p> <p><b>Set-up</b></p> <p><b>Demonstration and action</b></p> <p><b>Instruction</b></p> <p><b>Record</b></p> <p><b>Note</b></p>	<p><b>Standing on 1 foot</b></p> <p>Static balance</p> <p>2-4 years old</p> <p>None</p> <p>Provide a large enough area where the child can stand.</p> <p>Place hands on hips.</p> <p>Stand on 1 foot with the free leg bent 90 degrees at the knee.</p> <p>Can you stand on 1 foot like I did? Let's see how long you can stand like that.</p> <p>Number of seconds the child stands still. Count seconds (1-crocodile-2-crocodile-3-crocodile...) out loud to encourage the child to balance for as long as possible.</p> <p><i>Stop counting when any of the following occur:</i></p> <ul style="list-style-type: none"> <li>▪ The child drops free foot onto the floor.</li> <li>▪ The child sways more than 20 degrees.</li> <li>▪ The child removes one or both hands from hips.</li> </ul> <p><i>Record the leg that the child uses to balance in the first testing session. Ensure that the child uses this same leg for subsequent tests.</i></p>	
<p><b>Item 2a</b></p> <p><b>Skill</b></p> <p><b>Age</b></p> <p><b>Equipment</b></p> <p><b>Set-up</b></p> <p><b>Demonstration and action</b></p> <p><b>Instruction</b></p> <p><b>Record</b></p>	<p><b>Tip-toe on a line</b></p> <p>Dynamic balance</p> <p>2-3 years old</p> <p>Masking tape</p> <p>Tape measure</p> <p>Prepare a taped line on the floor that is at least 4cm wide and 2m long</p> <p>Walk forward on the line on tiptoes with hands on hips</p> <p>Place your hands on your hips and keep them there. Walk on your tiptoes on the line like I did.</p> <p>How far (cm) the child walks on the line.</p> <p><i>Stop test when any of the following occur:</i></p> <ul style="list-style-type: none"> <li>▪ The child steps off the line.</li> <li>▪ The child removes one or both hands from hips.</li> </ul>	

<p><b>Item 2b</b></p> <p><b>Skill</b></p> <p><b>Age</b></p> <p><b>Equipment</b></p> <p><b>Set-up</b></p> <p><b>Demonstration and action</b></p> <p><b>Instruction</b></p> <p><b>Record</b></p>	<p><b>Walking on a line</b></p> <p>Dynamic balance</p> <p>3-4 years old</p> <p>Masking tape</p> <p>Tape measure</p> <p>Prepare a taped line on the floor that is at least 4cm wide and 2m long</p> <p>Walk forward on the line using a normal stride with hands on hips</p> <p>Place your hands on your hips and keep them there. Walk on the line like I did.</p> <p>How far (cm) the child walks on the line.</p> <p><i>Stop test when any of the following occur:</i></p> <ul style="list-style-type: none"> <li>▪ Child steps off the line.</li> <li>▪ Child removes one or both hands from hips.</li> </ul>	
<p><b>Item 3</b></p> <p><b>Skill</b></p> <p><b>Age</b></p> <p><b>Equipment</b></p> <p><b>Set-up</b></p> <p><b>Demonstration and action</b></p> <p><b>Instruction</b></p> <p><b>Record</b></p>	<p><b>Jumping forward</b></p> <p>Leg strength and coordination</p> <p>2-4 years old</p> <p>Masking tape</p> <p>Tape measure</p> <p>Tape a 20cm line onto the floor perpendicular to the tape measure laid down on the floor</p> <p>Stand with both feet's toes behind the line (at 0cm). Jump forward using a 2-foot take-off and landing.</p> <p>Jump like I did. Show me how far you can jump.</p> <p>Distance (cm) to the back of the heel closest to the take-off line when landing.</p> <p><i>Only record a distance if:</i></p> <ul style="list-style-type: none"> <li>▪ The child uses a 2-foot take-off and landing.</li> <li>▪ The child doesn't fall.</li> </ul>	

<p><b>Item 4</b>  <b>Skill</b>  <b>Age</b>  <b>Equipment</b>  <b>Set-up</b>  <b>Demonstration and action</b>  <b>Instruction</b></p>	<p><b>Balloon fun</b>  Hand-eye coordination  2-4 years old  Balloon  Blow balloon up  Hit balloon up in the air with your hand.  Do not let the balloon touch the ground  Can you keep the balloon in the air by hitting it with your hand like I did?  <b>Record</b>  Number of times the balloon is hit up.  <i>Stop test when any of the following occur:</i></p> <ul style="list-style-type: none"> <li>▪ The balloon touches the ground.</li> <li>▪ The balloon goes out of control.</li> </ul>	
<p><b>Item 5</b>  <b>Skill</b>  <b>Age</b>  <b>Equipment</b>  <b>Set-up</b>    <b>Demonstration and action</b>            <b>Instruction</b>    <b>Record</b></p>	<p><b>Jumping Jacks</b>  Body Coordination  3-4 years old  None  Provide a large enough area where the child can jump without bumping into anything  Stand with legs together and arms at your side. Simultaneously move your arms up and out, while jumping and parting your legs. Arm and legs are then brought back to the start positions while perform a jump. These movements must be smooth and coordinated  Jump like I did. You may need to provide cues during the child's performance.  Number of correct jumps in a row.  One jump is counted when the arms and legs are returned to the start position.  <i>Only count the jumps when:</i></p> <ul style="list-style-type: none"> <li>▪ Both arms and legs are moved at the same time.</li> <li>▪ The child performs a jump.</li> </ul>	





# YBIKE ACTIVITIES AND GAMES

(Step 4)

## YBIKE Free Play

Provide a stimulating environment by putting obstacles down, or finding a hill to ride up and down and let the children ride freely. Let them chose what they want to do, and how they want to do it. They might even give you ideas. Younger children might prefer this to a very structured lesson.

## YBIKE Follow my leader

Have the children ride in a line with their YBIKE's. Instruct them to copy what the front person is doing. Give each child a turn at the front. Encourage creativity!

## YBIKE Directions

Ensure that there is enough space for the children to move. Have them watch you, and give them directions to go in. Call "Forward" and they should ride forward. Call "Back" and they should ride backwards. Same for left and right. Make sure that you are standing in front of them at all times. To make it more challenging, use your arms to give directions without saying the direction. On a change of signal blow a whistle. When the signal changes have the children shout out the direction.

## YBIKE Squiggly Wiggles

Place skipping ropes on the ground in patterned lines. Ensure that the turning circles are big enough for the YBIKE. Use colours and words to describe the colour or pattern of the line that the child must trace, or get the child to give you feedback about the pattern or the colour. Encourage the children to trace over the lines with the Y-bike.



### Modifications:

- Use different colour ropes to make to lines easier to discriminate.
- Place the lines on top of each other to make it more challenging

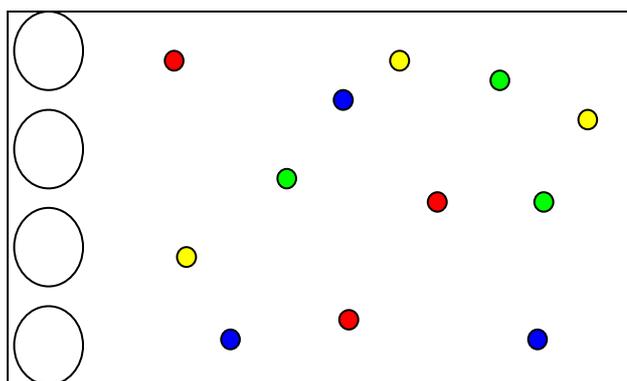
## Follow the Ball

Place a ball in front on the front wheel of the YBIKE, encourage the child to push the ball around the play area without bumping into anyone. For a younger child a bigger ball will be easier.

## Collecting Sheep

This is a progression of *Follow the ball*, so ensure that the children are comfortable with that activity before moving on to this one.

Spread balls around the play area. Assign each child a hoop or area where they can move their “sheep” too. Explain to the children that the balls are sheep and they need to collect the “sheep” and herd them back to their hoop.



### Modifications:

*To make it easier:*

Get the children to work together to collect the balls into one area.

*To make it more challenging (only recommended for the older ages):*

Put a time limit on the time that they have to collect the balls.

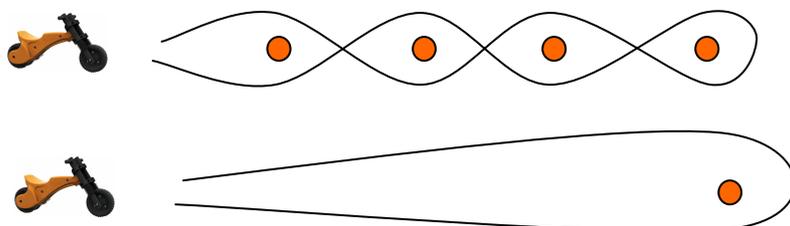
Give each child a colour ball that they need to collect

Use smaller balls

## YBIKE relays

Divide children equally into a few groups. Assign at least 1 YBIKE to each group. Give each child at least 3 turns per relay item.

*Relay ideas:*



### Modifications:

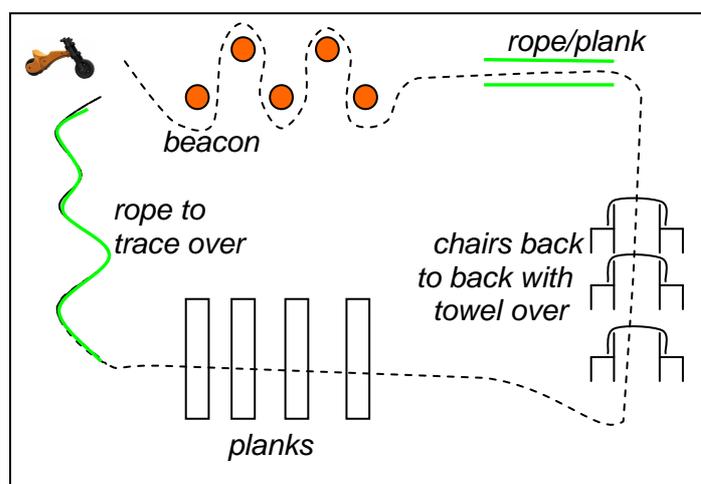
Place a ball or a beanbag on the beacon. Child 1 rides to the beacon and picks up the ball or beanbag and rides back to the start where he or she passes the YBIKE and the object over to the child 2 who replaces the object back in position. To make it more challenging get the child to balance the beanbag on a part of the body, or have them pick up the beanbag without using their hands. Or have them dribble the ball.

## YBIKE Gymkhana

Place various objects like balls and beanbags around the play area. On your go have the children ride around and pick objects up and see if they can carry them around while they try to collect more until you say stop. If appropriate have the children count the number of items, or for the younger children get them to group the items into colours.

## Obstacle Course

Place obstacles around the play area. Explain the route to the children. Use words such as under, over, around to explain the obstacles. Ask the children to explain what they have to do or are busy doing. To start get the children to follow you around the course.



Extras needed for a 30 minute lesson plan:

Minutes	Activity	Equipment
5	Free play	Anything that you have
5	YBIKE Directions	Whistle
5	YBIKE Follow my leader	
5	YBIKE Squiggly Wiggles	Ropes
10	Obstacle Course	Beacons Planks Ropes Chairs Towels Plus anything else

(Step 5)

Complete WOW Cards after each play session to encourage the child and to keep parents up to date with his or her progress.

Example WOW Card:

**wow** well done!

*David*

.....

YOU HAVE COMPLETED PLAY SESSION .....**2**..... OF THE YBIKE PROGRAMME  
THAT FOCUSES ON **MOTOR SKILLS DEVELOPMENT**.

PRACTISING THESE SKILLS ..*Balance & coordination*.. WILL HELP YOU  
*In sport and school work*

.....

YOUR TEACHER ..... *Anne* ..... & THE YBIKE TEAM

DATE ..... *19/01/2010* .....

**YBIKE**

[WWW.YBIKE.CO.ZA/PROGRAMME](http://WWW.YBIKE.CO.ZA/PROGRAMME)





**Motor Skill Programme – Individual Tracking Chart**

Name: .....

Quantity	Item 1 - Static Balance				Item 2 - Dynamic Balance				Item 3 - Leg Strength & Coordination				Item 4 - Hand Eye Coordination				Item 5 - Body Coordination (3-4yrs olds only)							
	Test 1	Test 2	Test 3	Test 4	Test 1	Test 2	Test 3	Test 4	Test 1	Test 2	Test 3	Test 4	Test 1	Test 2	Test 3	Test 4	Test 1	Test 2	Test 3	Test 4				
9																								
8																								
7																								
6																								
5																								
4																								
3																								
2																								
1																								
0																								
	Test 1	Test 2	Test 3	Test 4	Test 1	Test 2	Test 3	Test 4	Test 1	Test 2	Test 3	Test 4	Test 1	Test 2	Test 3	Test 4	Test 1	Test 2	Test 3	Test 4				
Skill	Item 1 - Static Balance				Item 2 - Dynamic Balance				Item 3 - Leg Strength & Coordination				Item 4 - Hand Eye Coordination				Item 5 - Body Coordination (3-4yrs olds only)							
Date																								
Notes																								

Assess the children after each term (4 tests per year) to track improvements in their fundamental gross motor skills. This should be done using the testing procedure (stated in step 2). However, the additional chart below is provided to track more tests if required.



# CONCLUSION

Childhood is an essential time for the development of fundamental gross motor skills. This programme allows the children to have lots of fun and enjoy the learning experience.

The YBIKE itself a great toy for children to enhance motor skills, by allowing children the opportunity to practise their gross motor skills. The YBIKE provides a new way to explore their environment. Every minute on the YBIKE is pure bliss, and they will never want to get off!

Teachers and parents will see an improvement in skill levels such as static and dynamic balance, bilateral coordination and physical self-confidence.

Through this programme, the children will be encouraged to develop crucial skill to help them become healthy, happy and confident individuals, ready to take their roles in the world!



# REFERENCES

1. Au, A. (1983). The effects of a motor enrichment programme on pre-school children. *The Journal of The Hong Kong Physiotherapy Association*, 5:5-9.
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3. Pieterse, M. (2002). *School readiness through play*. Hoheizen: Metz Press.
4. Thornton, C.D. & Sutterby, J.A. (2006). Developing balancing skills on the playground. *Playground Magazine*. 10 May. [Hyperlink <http://playgroundmag.com/news/print.cfm?id=1265>]. 8 May 2008.

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for their involvement in developing this programme.



# CONGRATULATIONS!



## MOTOR SKILLS PROGRAMME

HE/SHE HAS DONE VERY WELL & SHOWN SUBSTANTIAL IMPROVMENTS IN:

STATIC BALANCE – INCREASE OF ..... %

DYNAMIC BALANCE – INCREASE OF ..... %

LEG STRENGTH & Co-ORDINATION – INCREASE OF ..... %

EYE Co-ORDINATION – INCREASE OF ..... %

BODY Co-ORDINATION – INCREASE OF ..... %

THESE FUNDAMENTAL MOTOR SKILLS ARE ESSENTIAL FOR ACHIEVING SCHOOL READINESS AS WELL AS FOR FACILITATING A HIS/HER PROGRESSION THROUGH SCHOOL BOTH IN ACADEMICS AND SPORTS.

INDEPENDENT STUDIES HAVE SHOWN THAT CHILDREN WHO DEVELOP BETTER BALANCE AND CO – ORDINATION SKILLS EARLIER IN LIFE WILL HAVE ADVANTAGES IN SPORT, WILL HAVE BETTER SELF CONFIDENCE, BETTER SPATIAL AWARENESS, BETTER POSTURE AND EVEN THAT THEY WILL STUDY AND LEARN BETTER IN FUTURE LIFE .

INDEPENDENT STUDIES ALSO SHOW THAT YBIKE BALANCE BIKE ENCOURAGES SUBSTANTIAL IMPROVMENTS IN VARIOUS IMPORTANT SKILLS INCLUDING BALANCE & COORDINATION & PHYSICAL SELF-CONFIDENCE.

YBIKE WILL ENABLE A CHILD TO LEARN BALANCE FROM AN EARLY AGE AND IN ALMOST ALL CASES, CHILDREN WHO USE YBIKE DO NOT NEED TO USE STABILIZERS WHEN THEY BEGIN USING THEIR FIRST BICYCLES. STABILIZERS HAVE BEEN PROVEN TO ACTUALLY HINDER A CHILD’S BALANCE AND CO – ORDINATION DEVELOPMENT.

SIGNED: .....

DATE: .....

PLEASE CONTACT YOUR LOCAL YBIKE DISTRIBUTOR FOR MORE INFORMATION

[WWW.YBIKE.COM](http://WWW.YBIKE.COM)

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